



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,751	07/14/2003	Luke W. Clauson	017-001	7398
32746	7590	07/11/2005	EXAMINER	
HOEKENDIJK & LYNCH, LLP			LEWIS, TISHA D	
P.O. BOX 4787			ART UNIT	
BURLINGAME, CA 94011-4787			PAPER NUMBER	

3681

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,751

Applicant(s)

CLAUSON, LUKE W.

Examiner

TISHA D. LEWIS

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17, 19-21, 23-26, 29-33, 53-56, 58, 61-66 and 96-120 is/are pending in the application.
- 4a) Of the above claim(s) 22 and 57 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31 and 96-120 is/are allowed.
- 6) ☒ Claim(s) 17, 19-21, 23-26, 30, 32, 33, 53-56, 58, 61-63 and 65 is/are rejected.
- 7) ☒ Claim(s) 29, 64 and 66 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

The following is a response to the amendment received on April 26, 2005 which has been entered.

Response to Amendment

Claims 17, 19-21, 23-26, 29-33, 53-56, 58, 61-66 and 96-120 are pending in the application. Claims 1-16, 18, 27, 28, 34-52, 59-60 and 67-95 are cancelled. Claims 22 and 57 are withdrawn.

-The objection to claim 32 has been withdrawn due to applicant correcting grammar in the claim.

-The 112 2nd rejection of claims 17, 19-21, 23-33 and 96-109 is withdrawn due to applicant correcting limitations having lack of antecedent basis in claims 17 and 96.

-The 102(e) rejection of claims 17, 19-21, 23-27, 30, 32, 33 and 86 has been withdrawn due to applicant amending claim 17 over the prior art of record and canceling claim 86.

-The indicated allowability of claims 53-56, 58, 61, 62 and 65 is withdrawn in view of the newly discovered reference(s) to Schnelle ('283).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17, 19-21, 23-26, 29, 30, 32 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3681

Claim 17 recites the limitation "the desired performance range" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 53-56, 58, 61, 62 and 65 are rejected under 35 U.S.C. 102(a) as being anticipated by Schnelle ('283). As to claim 53, Schnelle discloses a first motor (via 11), a second motor (26, 27), an output shaft (40), a synchronizer (36-38), a planetary gear set (16, 17) having a ring gear, sun gear, carrier and planet gears coupled to at least one of the output shaft, first motor and second motor, the synchronizers when engaged to provide a gear ratio, synchronize the first motor (via 11), second motor (shafts 31 or 32) and the output shaft to provide an output ratio, when the second motor (26, 27) speed changes, the output shaft speed changes at a constant engine rpm (column 3, lines 55-62).

As to claim 54, the ratio is controlled by an specified engine torque demand.

As to claims 55 and 56, the first motor is an engine and the second motor is a electric machine.

As to claim 58, the first motor is coupled to the sun gear, the second motor is coupled to the carrier and the output shaft is coupled to the ring gear.

Art Unit: 3681

As to claims 61 and 62, the first motor is operated within a desired performance range wherein the ratio is varied within that range by the second motor.

As to claim 65, before output to the output shaft, the first and second motor power is combined to provide output to the output shaft.

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 53-56, 58, 61, 62 and 65 are rejected under 35 U.S.C. 102(e) as being unpatentable by Holmes ('631). As to claims 53 and 54, Holmes discloses a variable transmission having a first motor (60), a second motor (22), an output shaft (connecting shaft 20 outputting to planetary 18), axially shiftable gears (46-50) for synchronizing rotation between the first motor, second motor and output shaft, a planetary gear set (16) including a ring gear (30), a sun gear (32), a carrier (36) supporting a planet gear (34), both motors and output shaft being coupled to one of the planetary gears (column 3, lines 24-26), the ratio between the first motor and output shaft is varied by varying the speed of the second motor (reducing the speed of motor 22 to zero then increasing the speed after that), wherein the speed of the output shaft increases when the speed of the second motor increases (when speed of motor 22 increases, the speed of shaft 20 is increased to provide output to the planetary 18 providing the ratio) and the first motor speed is held constant (Figure 3, Nss held constant, IN).

As to claims 55 and 56, Holmes discloses the first motor being an engine (60) and the second motor being an electric motor (22).

As to claim 58, Holmes discloses the first motor being coupled to the sun gear, the second motor being coupled to the carrier and the output shaft being coupled to the ring gear (Figure 1E).

As to claims 61 and 62, Holmes discloses a specified performance range for the first motor to operate.

As to claim 65, Holmes discloses a motor assisting mode with the engine which combines power before to be sent to the output.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17, 19-21, 23-26, 30, 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holmes in view of Severinsky ('970). As to claims 17 and 19, Holmes discloses a variable transmission having a first motor (60), a second motor (22), an output shaft (connecting shaft 20 outputting to planetary 18), a planetary gear set (16) including a ring gear (30), a sun gear (32), a carrier (36) supporting a planet gear (34), both motors and output shaft being coupled to one of the planetary gears (column 3, lines 24-26), the ratio between the first motor and output shaft is varied by varying the speed of the second motor (reducing the speed of motor 22 to zero then increasing the

Art Unit: 3681

speed after that), wherein the speed of the output shaft increases when the speed of the second motor increases (when speed of motor 22 increases, the speed of shaft 20 is increased to provide output to the planetary 18 providing the ratio) and the first motor speed is held constant (Figure 3, Nss held constant, IN).

Holmes does not disclose the actual performance range and power output for the first motor.

Severinsky discloses a hybrid vehicle having a first motor wherein the motor in city and suburban driving has power output increases of 115% and 125% under an rpm of 2000 (Figure 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Holmes with a first motor performance in view of Severinsky to have a first and second motor separately or simultaneously apply torque to driving wheels with maximum fuel efficiency without penalty in convenience, performance and cost.

As to claims 20 and 21, Holmes discloses the first motor being an engine (60) and the second motor being an electric motor (22).

As to claim 23, Holmes discloses the first motor being coupled to the sun gear, the second motor being coupled to the carrier and the output shaft being coupled to the ring gear (Figure 1E).

As to claims 24 and 25, Holmes discloses axially shiftable gears (46-50) for synchronizing rotation between the first motor, second motor and output shaft.

As to claims 26, Holmes discloses a specified performance range for the first motor to operate.

As to claims 30 and 32, Holmes discloses a motor assisting mode with the engine which combines power before to be sent to the output.

As to claim 33, Holmes discloses the second motor also being a generator to provide electrical energy and a storage device for storing that energy (62).

Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schnelle in view of Severinsky ('970). Schnelle discloses a first motor, but does not disclose the actual performance range and power output for the first motor.

Severinsky discloses a hybrid vehicle having a first motor wherein the motor in city and suburban driving has power output increases of 115% and 125% under an rpm of 2000 (Figure 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Schnelle with a first motor performance in view of Severinsky to have a first and second motor separately or simultaneously apply torque to driving wheels with maximum fuel efficiency without penalty in convenience, performance and cost.

Allowable Subject Matter

Claims 31 and 96-120 are allowed.

Claims 29, 64 and 66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 3681

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 872-9326 before final and 703-872-9327 after final**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to
the Patent and Trademark Office (Fax No. (703) 000-0000) on _____ (Date)

Typed or printed name of person signing this certificate:

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3681


-Lynch et al ('795) is cited as having a hybrid vehicle wherein the engine performance is 2000 to 3000 rpm with 30% peak.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 571-272-7093. The examiner can normally be reached on M-Thur 6 AM TO 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES A. MARMOR can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tdl
July 7, 2005


TISHA D. LEWIS
PRIMARY EXAMINER
Au 3681 7/7/05